



2.2 Characteristics of Data

Population Data vs. Sample Data

- Population

- All the individuals who belong to a group being studied

- Sample

- A selection of individuals taken from a population

Examples: Identify the population

- Whom do you plan to vote for in the next election?

- Population: All people in Ontario eligible to vote

- Do women prefer to wear ordinary glasses or contact lenses?

- Population: All women who use corrective lenses

Cross-Sectional & Longitudinal Studies

- Census
 - Information gathered about an entire population
- Cross-Sectional Study
 - Carried out over a specific time and focuses on a wide range of individuals
- Longitudinal Study
 - Focuses on a small group over an extended period. (Asks the same people the same questions repeatedly over time)

Example: Identify the Type of Study

- Question: How do the opinions about the house system change among students from Grade 9 to Grade 12?
 - Asking students from each grade
 - Cross-Sectional
 - Asking a selection of students in grade 9, then the same students when they're in grade 10, then grade 11, then grade 12
 - Longitudinal

Qualitative & Quantitative Variables

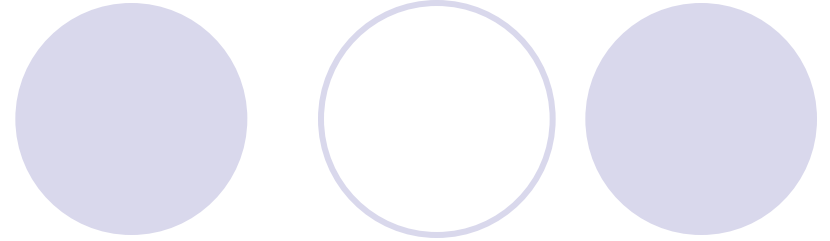
- Qualitative Variables
 - Cannot be measured numerically
- Quantitative Variables
 - Can be measured numerically
 - May be discrete or continuous

Example: Identifying Variables and Data Types

- Thesis Question: What attributes of an athlete's physique, training regimen, and competition history are predictors of success?
 - Is there a relationship between a high jumper's height and best jump of the season?
 - Quantitative – Discrete
 - Are there common training exercises among the top five high jumpers on our track team?
 - Qualitative



Homework



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- # 1-9

- For questions 5 and 7 pick **only** 3 scenarios.